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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/619,954 | 07/15/2003 | Theodore C. White | QE1051.US | 7822 |
| 7590 | 04/21/2005 | | EXAMINER | |
| Klein, O'Neill & Singh, LLP Suite 510 2 Park Plaza Irvine, CA 92614 | | | CASIANO, ANGEL L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2182 | |

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/619,954 | WHITE ET AL. |
| | Examiner | Art Unit |
| | Angel L Casiano | 2182 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 July 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-11 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 July 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20050404</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The present Office action is in response to Application dated 15 July 2003.

Claims 1-11 are pending. All claims have been examined.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 04 April 2005 was filed after the mailing date of the Application on 15 July 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- Figure 1B: 108J, 108G, 108I, 108F
- Figure 3: 301
- Figure 4: 402

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 6, 8-9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Harumoto et al. [US 6,460,097 B1].

Regarding claim 1, Harumoto et al. teaches a method for processing incoming data by a storage controller with a buffer controller coupled to a buffer memory (see Abstract; Figure 1). The reference teaches the steps of *evaluating* incoming data block *size* (see Abstract; col. 4, lines 58-62); determining the incoming data requires *padding* (see col. 4, line 63); and padding incoming data such that the incoming data can be processed by the buffer controller (see “padding so as to have a fixed size *K*; col. 4, line 64).

As for claim 2, the reference teaches a method in which the incoming data, after being padded, may be stored in the buffer memory (see “send buffer”; col. 15, lines 5-6).

As for claim 3, the reference teaches a method, wherein the buffer controller pads incoming data in real time before being stored in the buffer memory (see col. 15, lines 11-20).

Regarding claim 6, Harumoto et al. teaches a controller (see col. 15, line 11) for processing incoming. The reference teaches a buffer controller coupled to a buffer memory (see Abstract; Figure 1). The reference teaches the steps of evaluating incoming data block size (see Abstract; col. 4, lines 58-62); determining the incoming data requires padding (see col. 4, line 63); and padding incoming data such that the incoming data can be processed by the buffer controller (see “padding so as to have a fixed size K ; col. 4, line 64).

As for claim 8, the reference does not use the term “firmware” to refer to the setting of the controller. However, the reference teaches the controller specifically performing the steps of “deciding”, “transmitting”, “and controlling” (see col. 15, lines 10-20). Also, the “controller *decides the data block to be sent out for the given period (f)* of data stream stored by the read buffer according to the time table, transmits the decided data block from the read buffer to the send buffer, adds padding data to the transmit data block so as to have a fixed size (K) when the size (S_m) of transmit data block is not equal to the fixed size (K), *controls the outputting of the resultant data block from the send buffer to the external device via the digital interface*” (emphasis added). Therefore, the reference teaches setting the controller to perform these steps, including *receiving* the incoming data.

Regarding claims 9 and 11, Harumoto et al. teaches the disclosed controller in a system. Therefore, the reference also teaches the system having the controller and performing the claimed steps. The present claims are therefore rejected under the same basis.

6. Claims 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki et al. [US 6,198,876 B1].

Regarding claim 4, Iwasaki et al. teaches a method for reading data (see Abstract), including a buffer memory and controller (see Figure 8). The reference teaches determining if any pads need to be removed from the data and removes pads from the data (see col. 3, lines 9-18; “removing padding data”, col. 4, lines 66-67; col. 5, lines 1-4, 41).

As for claim 5, the removed data is processed using a storage controller interface (see col. 5, lines 37-41 and Fig. 8).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harumoto et al. [US 6,460,097 B1] in view of Iwasaki et al. [US 6,198,876 B1].

As for claim 7, Harumoto et al. teaches a controller in a system for padding incoming data. However, the reference fails to teach the step of removing padding from data that is read from the buffer memory. Regarding this limitation, Iwasaki et al. teaches a method for reading data (see Abstract), including a buffer memory and controller (see Figure 8). The reference teaches determining if any pads need to be *removed* from the data and *removes* pads from the data (see col. 3, lines 9-18; “removing padding data”, col. 4, lines 66-67; col. 5, lines 1-4, 41). At the time of the invention one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to control a SCSI interface circuit in a system for reproducing data, as taught by Iwasaki et al. (see col. 5, lines 37-41).

Regarding claim 10, the combination of references teaches the disclosed controller in a system. Therefore, the combination also teaches the system having the controller and performing the claimed steps. The present claim is therefore rejected under the same rationale as claim 7.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Rambaud [US 20020146061 A1] teaches a “control device can read or change the value of the AEF, change the state of the multiplexer 120, and control the writing of the useful or padding data in the buffer 110”.
- Gaddis et al. [US 5815501 A] teaches a “contiguous collection of ATM cells (with inter-cell padding) containing the segmented data of the Ethernet frame”.

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- Kuver et al. [US 6438604 B1] teaches, “while CPU 20 is controlling the padding and flow of data packets from the first buffer of SDRAM 22 to network controller 23, DMA 17 is capturing data packets and filling the second buffer of SDRAM 22”.
- Potter et al. [US 6708258 B1] teaches a “direct memory controller is accessible to the at least one communications controller to directly store the packet data into the buffer when the buffer is owned by the at least one communications controller, and wherein, when so indicated by the attribute, the padded packet data are stored only in complete full memory lines”.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
15 April 2005



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